CITY OF NEW BEDFORD
CONTRIBUTORY RETIREMENT SYSTEM

Actuarial Valuation Report

January 1, 2004

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Report Summary:

Highlights	**January 1, 2001**	**January 1, 2004**
Contributions		
Funding Schedule FY 2005	$16,148,800	$16,148,800
Funding Schedule FY 2006	16,747,800	18,624,182
Funded Ratios		
GAS No. 25	51.4%	46.1%
Participants		
Actives	2,452	2,267
Inactives	297	306
Retirees and Beneficiaries	1,251	1,401
Disabilities	312	326
Total	4,312	4,300
Payroll		
Payroll of Active Members	$75,089,435	$75,414,151
Average Payroll	30,624	33,266
Normal Cost		
Employer	3,209,787	3,368,554
Employee	5,863,132	5,954,420
Administrative Expenses	350,000	375,000
Total	9,422,919	9,697,974
Actuarial Accrued Liabilities		
Actives	154,702,220	166,990,739
Retirees, Beneficiaries, Disabilities and Inactives	151,111,411	213,959,717
Total	305,813,631	380,950,456
Actuarial Value of Assets	157,129,409	175,663,857
Unfunded Actuarial Accrued Liabilities	$148,684,222	$205,286,599

Introduction

This report presents the City of New Bedford actuarial valuation findings as of January 1, 2004, under the Commonwealth of Massachusetts Retirement System.

The actuarial valuation is based on:

- Provisions Chapter 32 of the Massachusetts General Laws, "M.G.L", as of January 1, 2004.
- Employee data provided by the Retirement Board
- Asset information reported to the Public Employee Retirement Administration Commission by the City of New Bedford Contributory Retirement System
- Actuarial assumptions approved by the Retirement Board

The valuation and appropriation forecast are prepared in accordance with Chapter 32 of the M.G.L. as of January 1, 2004.

The valuation and forecast do not account for:

- Any subsequent changes in the law
- Chapter 32 of the M.G.L., Section 3(8)(c) transfers between systems
- State-mandated benefits
- Cost-of-living increases granted to retired members between 1982 and 1997. The cost of these benefits has been assumed by the State under Proposition Two and One-Half.

Actuarial Experience

In performing the actuarial valuation, various assumptions are made regarding such factors as mortality, retirement, disability, and withdrawal rates as well as both payroll, salary increases, and investment returns. A comparison of the current valuation and the prior valuation is made to determine how closely actual experience corresponded to anticipated occurrences. This analysis of the system provides insight into the overall quality of the actuarial assumptions and helps explain any change in the annual appropriation.

During the previous three years, the total unfunded actuarial accrued liability increased by 38.1% to $205,286,599. The increase is the result of net unfavorable actuarial experience during the preceding years. The primary component of the unfavorable experience was an investment return less than the 8.5% assumption.

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Actuarial Costs and Liabilities:

Normal Costs

The normal cost is the sum of the individual normal costs determined for each member as if the assumptions underlying the cost determinations had been exactly realized. An individual normal cost represents that part of the cost of a member's future benefits which are assigned to the current year as if the costs are to remain level as a percentage of the member's pay. Benefits payable under all circumstances (i.e., retirement, death, disability, and terminations) are included in this calculation. Anticipated employee contributions to be made during the year are subtracted from the total normal cost to determine employer normal cost. The total normal cost is divided by total payroll to determine the normal cost as a percent of pay. The normal cost is shown in Table I.

Table I

	January 1, 2001	January 1, 2004
Superannuation	$7,084,898	$6,373,514
Death	683,855	462,585
Disability	908,372	1,572,182
Terminations	395,794	914,692
Administrative Expenses	350,000	375,000
Total Normal Cost	9,422,919	9,697,974
% of Pay	12.5%	12.9%
Employee Contributions	5,863,132	5,954,420
% of Pay	7.8%	7.9%
Employer Normal Cost	$3,559,787	$3,743,554
% of Pay	4.7%	5.0%

Present Value of Actuarial Accrued Liabilities

The actuarial accrued liabilities (AAL) represents today's value of all benefits earned by the actives and inactives. The AAL can be compared to the assets to determine the funded status of the Plan. The value of these earned benefits is shown in Table II below.

Table II

	January 1, 2001	January 1, 2004
Actives		
Superannuations	$139,179,513	$156,092,591
Death	7,901,414	$4,272,429
Disability	8,324,302	$10,148,878
Terminations	(703,009)	($3,523,159)
Retirees and Inactives		
Retirees	101,446,502	147,798,687
Disabled Retirees	48,535,904	64,317,073
Inactives	1,129,005	1,843,957
Total	$305,813,631	$380,950,456

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Present Value of Future Benefits

The present value of future benefits represents today's value of all benefits earned by the inactives as well as all benefits earned and expected to be earned in the coming years by the actives. The difference between the present value of future benefits and the present value of actuarial accrued liabilities is the value of benefits to be earned in the coming years. The value of the total expected benefits is shown in Table III.

Table III

	January 1, 2001	January 1, 2004
Actives		
Superannuation	$215,236,800	$212,871,535
Death	15,279,363	8,315,661
Disability	18,808,729	23,928,860
Terminations	4,078,485	5,263,412
Retirees and Inactives		
Retirees	101,446,502	147,798,687
Disabled Retirees	48,535,904	64,317,073
Inactives	1,129,005	1,843,957
Total	$404,514,788	$464,339,185

Funded Status and Appropriations:

Market Value of Plan Assets

The trust fund composition on a market value basis is shown in Table IV.

Table IV

	January 1, 2001	January 1, 2004
Cash equivalents	4,140,052	$4,470,737
Short term investments	0	0
Fixed income securities	59,324,778	52,140,311
Equities	68,144,298	90,019,846
International	5,823,819	0
Real Estate	0	8,283,835
Venture Capital	0	0
Other	20,660,611	13,093,630
Accounts receivable	56,270	2,377,227
Accounts payable	(1,897,539)	(3,450,801)
Accrued income	877,120	822,382
Total Market Value	$157,129,409	$167,757,166
Total Actuarial Value	$157,129,409	$175,663,857

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Actuarial Value of Assets

The actuarial value of assets is determined by projecting the market value of assets as of the beginning of the prior plan year with the assumed rate of return during that year (8.5%) and accounting for deposits and disbursements with interest at the assumed rate of return. An adjustment is then applied to recognize the difference between the actual investment return and expected return over a five year period. This preliminary actuarial value is not allowed to differ from the market value of assets by more than 10%. The calculation of the actuarial value of assets as of January 1, 2004 is presented in Table V.

		January 1, 2004
(1)	Market value at January 1, 2003	$140,817,979
(2)	2003 Contributions	$23,076,172
(3)	2003 Payments	($27,842,725)
(4)	Net interest adjustment at 8.5% on (1), (2), and (3) to December 31, 2003	$11,766,950
(5)	Expected market value on January 1, 2004 (1) + (2) + (3) + (4)	$147,818,376
(6)	Actual market value on January 1, 2004	$167,757,166
(7)	2003 (Gain) / Loss	($19,938,790)
(8)	80% of 2003 (Gain) / Loss	($15,951,032)
(9)	2002 (Gain) / Loss	$24,305,774
(10)	60% of 2002 (Gain) / Loss	$14,583,464
(11)	2001 (Gain) / Loss	$15,531,143
(12)	40% of 2001 (Gain) / Loss	$6,212,457
(13)	2000 (Gain) / Loss	$15,309,008
(14)	20% of 2000 (Gain) / Loss	$3,061,802
(15)	Actuarial value on January 1, 2004, (6) + (8) + (10) + (12) + (14)	$175,663,857
(16)	but not less than 90% nor greater than 110% of (6)	$175,663,857
	Ratio of actuarial value to market value	104.71%

Unfunded Actuarial Accrued Liabilities

Under the Entry Age Normal Actuarial Cost Method, the Actuarial Accrued Liability represents what the accumulated assets would have been as of the valuation date if:

- current plan provisions and assumptions had always been in effect,
- experience conformed exactly to assumptions, and
- the normal cost had been contributed each year since inception.

The actuarial value of the Fund's assets as of the end of the prior year are subtracted from the Actuarial Accrued Liability (AAL) to determine the Unfunded Actuarial Accrued Liability (UAAL) as of the valuation date. Over time, annual pension contributions will accumulate Plan assets equal to the AAL, and the UAAL will be eliminated. Thereafter, annual contributions equal to the normal cost will keep the Plan's assets and liabilities in balance. The UAAL is developed in Table VI.

Table VI

	January 1, 2001	January 1, 2004
Actuarial Accrued Liability	$305,813,631	$380,950,456
Actuarial Assets	157,129,409	175,663,857
Unfunded Actuarial Accrued Liability	$148,684,222	$205,286,599
Funded Status	51.4%	46.1%

Appropriations

The pension appropriation for the upcoming fiscal years have been calculated in accordance with the requirements set forth in Section 22D of Chapter 32 of the Massachusetts General Laws. These amounts were calculated to comply with the June 30, 2028, full funding mandate for all accrued liabilities. The pension appropriation is the sum of the:

- Employer normal cost,
- Increasing amortization of the prior unfunded actuarial accrued liability by June 30, 2024
  $ 199,406,348 over 20 years with 4.5 % increasing payments
- Level amortization of the Early Retirement Incentive unfunded liability by June 30, 2008
  $ 5,880,251 over 15 years
- Interest adjustment for payment as of August 1st

The pension appropriation is shown in Table VII. The amortization of the losses is being phased in during FYE06 and Fiscal 2007. The balance of losses as of the beginning of FYE08 is amortized over 17 years.

Table VII

	January 1, 2001	January 1, 2004
Normal cost	$3,559,787	$3,743,554
Amortization payment of the accrued liability	9,475,165	13,917,038
Amortization payment of ERI	0	652,629
Total cost	$13,034,952	$18,313,221
% of Pay	17.4%	24.3%
Fiscal 2005 cost	$16,148,800	$16,148,800
Fiscal 2006 cost	$16,747,800	$18,624,182
Fiscal 2007 cost	$17,368,800	$20,814,079
Fiscal 2008 cost	$18,013,800	$21,931,876

Appropriation Forecast

The following exhibit forecasts employer and employee contributions over the next 32 years under the adopted funding schedule.

Note that the forecast is based upon an "open group" method. This method assumes that sufficient employees will be hired each year to keep the number constant. The total payroll of the system is expected to increase 4.5% per year. The employee contribution rate is expected to increase to 10.5% by 2028 as members contributing base percentages 5%, 7%, and 8% are replaced by new members, whose base contribution is 9%. Payments are assumed to be made at the beginning of the year.

The employer total cost is expected to increase during the next 20 years until the unfunded liabilities are completely paid off, at which time only the normal cost will remain. The total FYE06 cost represents 23.6% of payroll, increasing to 25.5% over the next two years, decreasing to 22.8% by the time the unfunded liabilities are fully paid off, leaving only a normal cost of 2.8% thereafter. The decrease in the cost as a percentage of payroll is a result of the increase in member deductions.

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Appropriation Forecast
(amounts in thousands)

Fiscal Year Ending	Payroll*	Employee Contribution	Employer Normal Cost with Interest	Amortization Payments with Interest	Employer Total Cost with Interest	Employer Total Cost % of Payroll	Funded Ratio %**
2005	$75,414	$5,954	$3,926	$12,223	$16,149	21.4	46.1
2006	78,808	6,312	4,009	14,615	18,624	23.6	47.0
2007	82,354	6,689	4,092	16,722	20,814	25.3	48.5
2008	86,060	7,087	4,174	17,758	21,932	25.5	50.4
2009	89,933	7,508	4,255	18,527	22,781	25.3	52.5
2010	93,980	7,952	4,335	19,329	23,664	25.2	54.8
2011	98,209	8,421	4,413	20,168	24,581	25.0	57.1
2012	102,628	8,917	4,490	21,045	25,535	24.9	59.5
2013	107,247	9,439	4,564	21,962	26,526	24.7	62.0
2014	112,073	9,991	4,637	22,919	27,556	24.6	64.6
2015	117,116	10,573	4,706	23,920	28,626	24.4	67.4
2016	122,386	11,188	4,773	24,965	29,738	24.3	70.2
2017	127,893	11,836	4,836	26,058	30,893	24.2	73.1
2018	133,649	12,520	4,894	27,200	32,094	24.0	76.1
2019	139,663	13,241	4,949	28,393	33,342	23.9	79.3
2020	145,948	14,002	4,998	28,955	33,953	23.3	82.5
2021	152,515	14,805	5,042	30,258	35,300	23.1	85.8
2022	159,379	15,652	5,080	31,620	36,699	23.0	89.2
2023	166,551	16,545	5,110	33,043	38,153	22.9	92.7
2024	174,045	17,486	5,134	34,530	39,663	22.8	96.3
2025	181,877	18,479	5,149	0	5,149	2.8	100.0
2026	190,062	19,526	5,155	0	5,155	2.7	100.0
2027	198,615	20,630	5,151	0	5,151	2.6	100.0
2028	207,552	21,793	5,136	0	5,136	2.5	100.0
2029	216,892	22,774	5,367	0	5,367	2.5	100.0
2030	226,652	23,798	5,609	0	5,609	2.5	100.0
2031	236,852	24,869	5,861	0	5,861	2.5	100.0
2032	247,510	25,989	6,125	0	6,125	2.5	100.0
2033	258,648	27,158	6,401	0	6,401	2.5	100.0
2034	270,287	28,380	6,689	0	6,689	2.5	100.0
2035	282,450	29,657	6,990	0	6,990	2.5	100.0
2036	295,160	30,992	7,304	0	7,304	2.5	100.0

* Calendar basis

** As of beginning of the Fiscal Year

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GAS No. 25 and GAS No. 27

Effective for periods beginning after June 15, 1997, the Governmental Accounting Standards Board (GASB) requires the disclosure of pension related liabilities for public employer financial statements in accordance with Statements 25 and 27. These statements, which replace GASB Statement No. 5, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

Footnote disclosures required by GASB Statement No. 25 and 27 include a description of the plan, a summary of significant accounting policies, and information about contributions, legally required reserves, and investment concentrations. As a result of the oversight of the Public Employees Retirement Administration Commission (PERAC) and the conversion of unpaid contributions to pension related debt, the Net Pension Obligation (NPO) as required by Statement No. 27 will effectively always be equal to $0. The required disclosure information is shown in Table VIII.

Table VIII

		January 1, 2001	January 1, 2004
(1)	Actuarial Accrued Liability	$305,813,631	$380,950,456
(2)	Actuarial Value of Assets	157,129,409	175,663,857
(3)	Unfunded Actuarial Accrued Liability	148,684,222	205,286,599
(4)	Funded Ratio (2)/(1)	51.4%	46.1%
(5)	Covered Payroll	$75,089,435	$75,414,151
(6)	UAAL as a percentage of payroll: (3)/(5)	198.0%	272.2%
(7)	Annual Required Contribution (ARC)	$13,681,220	$16,148,800
(8)	Net Pension Obligation	$0	$0

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PERAC Annual Statement
APPENDIX PAGE 3
ACTUARIAL VALUATION AND ASSUMPTIONS

The most recent actuarial valuation of the System was prepared by Mellon Human Resources & Investor Solutions as of January 1, 2004.

The normal cost for employees on that date was:	$5,954,420	7.9% of pay
The normal cost for the employer was:	3,368,554	4.5% of pay

The actuarial liability for active members was:	$166,990,739
The actuarial liability for retired members was:	213,959,717
Total actuarial accrued liability:	380,950,456
System assets as of that date:	175,663,857
Unfunded actuarial accrued liability:	$205,286,599

The ratio of system's assets to total actuarial liability was	46.1%

The principal actuarial assumptions used in the valuation are as follows:

Investment Return:	8.5%
Rate of Salary Increase:	5.0%

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a percent of Covered Payroll (b-a)/c
01/01/04	$175,663,857	$380,950,456	$205,286,599	46.1%	$75,414,151	272.2%
01/01/01	157,129,409	305,813,631	148,684,222	51.4%	75,089,435	198.0%
01/01/98	133,140,386	248,033,340	114,892,954	53.7%	63,312,483	181.5%
01/01/96	84,143,582	189,485,031	105,341,449	44.4%	45,453,241	231.8%
01/01/92	67,895,696	177,053,757	109,158,061	38.3%	41,886,567	260.6%

Attach Copy of Current Approved Funding Schedule

EXHIBITS

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Age/Service Distribution with Salary as of January 1, 2004

Attained Age	Average Salary <5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
< 20	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
20-24	24	0	0	0	0	0	0	0	0	24
	12,918	0	0	0	0	0	0	0	0	12,918
25-29	96	16	0	0	0	0	0	0	0	112
	23,192	30,756	0	0	0	0	0	0	0	24,273
30-34	99	66	23	0	0	0	0	0	0	188
	26,978	40,407	46,938	0	0	0	0	0	0	34,135
35-39	75	105	60	44	0	0	0	0	0	284
	23,943	40,376	44,928	44,556	0	0	0	0	0	37,646
40-44	101	82	68	69	15	0	0	0	0	335
	21,817	31,047	43,296	44,792	48,892	0	0	0	0	34,381
45-49	72	79	58	76	43	22	0	0	0	350
	24,255	29,130	31,925	35,159	53,509	44,731	0	0	0	33,875
50-54	85	72	35	53	40	58	27	0	0	370
	22,443	27,769	31,212	32,553	44,589	51,327	37,625	0	0	33,787
55-59	63	56	47	59	26	46	41	4	0	342
	21,786	27,897	32,338	29,004	34,124	47,118	57,362	38,927	0	34,293
60-64	28	35	32	34	10	18	16	2	1	176
	27,142	28,515	26,448	28,627	28,136	31,568	47,892	80,652	30,355	30,598
65-69	6	16	6	6	1	6	2	0	2	45
	18,311	24,709	27,039	27,411	18,978	30,769	68,990	0	90,417	30,096
70+	2	7	7	7	2	7	5	2	2	41
	12,040	20,521	23,671	24,558	23,616	21,494	24,323	25,501	29,318	22,787
Total Employees	651	534	336	348	137	157	91	8	5	2,267
Average Salary	23,237	32,480	36,779	35,832	44,180	44,788	48,281	46,002	53,965	33,266

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Retiree Distribution as of January 1, 2004

	Number of Employees			Total Payments		
Attained Age	Male	Female	Total	Male	Female	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	0	0	0	0	0	0
40-44	1	0	1	7,466	0	7,466
45-49	4	1	5	28,485	7,886	36,371
50-54	9	7	16	202,049	72,931	274,980
55-59	54	31	85	1,524,771	323,391	1,848,162
60-64	88	64	152	2,068,521	694,453	2,762,973
65-69	107	99	206	2,079,807	1,060,222	3,140,030
70-74	108	112	220	1,699,786	1,052,230	2,752,016
75-79	157	109	266	2,209,171	799,069	3,008,240
80-84	154	91	245	1,785,764	586,209	2,371,973
85-89	88	48	136	1,070,119	273,988	1,344,107
90-94	32	24	56	316,584	131,631	448,215
95-99	10	3	13	83,160	15,900	99,060
Total	812	589	1401	13,075,683	5,017,909	18,093,593
Average (Age/Payment)	74.9	74	74.5	16,103	8,519	12,915
Frequency Percent	58	42	100	72.3	27.7	100

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Disabled Retiree Distribution as of January 1, 2004

	Number of Employees			Total Payments		
Attained Age	Male	Female	Total	Male	Female	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	1	0	1	45,048	0	45,048
35-39	1	0	1	31,248	0	31,248
40-44	9	0	9	236,187	0	236,187
45-49	19	2	21	599,010	10,960	609,970
50-54	25	5	30	742,649	53,063	795,712
55-59	43	4	47	1,177,206	50,373	1,227,579
60-64	39	3	42	979,701	48,141	1,027,842
65-69	44	1	45	1,076,934	19,061	1,095,995
70-74	27	2	29	671,221	33,239	704,460
75-79	42	4	46	787,898	27,850	815,748
80-84	29	2	31	489,192	8,503	497,695
85-89	21	1	22	315,813	5,364	321,177
90-94	1	1	2	17,995	8,832	26,828
95-99	0	0	0	0	0	0
Total	301	25	326	7,170,104	265,386	7,435,490
Average (Age/Payment)	66.8	65.8	66.7	23,821	10,615	22,808
Frequency Percent	92.3	7.7	100	96.4	3.6	100

EXHIBIT 4 - CASHFLOW FORECAST:

The following is a 30 year forecast of benefit payments net of state reimbursable COLA payments, Contribution Income and Investment Returns.

Plan Year Ending	Benefit Payments	Employee Contributions	Employer Contributions	Investment Returns	Net change in plan assets
2004	$25,705	$5,954	$16,149	$14,519	$10,917
2005	26,491	6,312	18,624	15,512	13,957
2006	27,358	6,689	20,814	16,751	16,896
2007	28,345	7,087	21,932	18,198	18,872
2008	29,354	7,508	22,781	19,804	20,739
2009	30,416	7,952	23,664	21,570	22,770
2010	31,546	8,421	24,581	23,507	24,963
2011	32,772	8,917	25,535	25,629	27,309
2012	34,174	9,439	26,526	27,945	29,736
2013	35,647	9,991	27,556	30,468	32,368
2014	37,195	10,573	28,626	33,214	35,218
2015	38,812	11,188	29,738	36,203	38,317
2016	40,430	11,836	30,893	39,458	41,757
2017	42,125	12,520	32,094	43,005	45,494
2018	43,796	13,241	33,342	46,874	49,661
2019	45,403	14,002	33,953	51,081	53,633
2020	47,128	14,805	35,300	55,647	58,624
2021	48,885	15,652	36,699	60,640	64,106
2022	50,627	16,545	38,153	66,104	70,175
2023	52,362	17,486	39,663	72,089	76,876
2024	54,129	18,479	5,149	77,398	46,897
2025	55,914	19,526	5,155	81,355	50,122
2026	57,581	20,630	5,151	85,594	53,794
2027	59,126	21,793	5,136	90,152	57,955
2028	60,581	22,774	5,367	95,059	62,619
2029	61,935	23,798	5,609	100,368	67,840
2030	63,103	24,869	5,861	106,130	73,757
2031	63,994	25,989	6,125	112,409	80,529
2032	64,592	27,158	6,401	119,278	88,245
2033	66,760	28,380	6,689	126,740	95,049

amounts in thousands

EXHIBIT 5 – SUMMARY OF PLAN PROVISIONS:

This summary is prepared in accordance with Chapter 32 as of January 1, 2004, and does not take into account any subsequent changes.

1. Administration

Each of the 107 contributory retirement systems for public employees for the Commonwealth of Massachusetts are guided by the applicable provisions of Chapter 32 of the Massachusetts General Laws and other applicable statutes. Although these boards operate semi-independently, there is a uniform set of rules governing benefits, eligibility, contributions, financing, and accounting.

2. Participation

Participation is mandatory for all full-time employees whose employment commences prior to age 65. Eligibility with respect to part-time, professional, temporary, or intermittent employment is governed by the local board. Membership is optional for certain elected officials, State officials appointed by the Governor, and certain hospital interns.

There are four classes of membership as follows:

(i) Group 1: Most general employees in State and local government

(ii) Group 2: Certain specified hazardous duty positions

(iii) Group 3: State police officers and inspectors

(iv) Group 4: Local police officers, firefighters, and designated employees of the municipal light department.

For members in more than one group, participation will be proportional.

3. Salary

Salary is defined as gross regular compensation. Salary does not include bonuses, overtime, severance pay, unused sick leave credit, or other similar compensation.

4. Member Contributions

Member contributions vary depending upon date hired as follows:

Date of Hire	Member Contribution Rate
Prior to 1975	5.0% of Salary
1975 to 1983	7.0% of Salary
1984 to 1996	8.0% of Salary
1996 and Later plus	9.0% of Salary
1979 and Later	2.0% of Salary in excess of $30,000

5. Average Salary

Average salary is used to determine a participant's benefit. It is defined as the average salary during the three consecutive-year period that produces the highest average. (Alternatively, if a greater amount results, it is the average rate of salary earned during the period or periods, whether or not consecutive, that constitutes the last three years preceding retirement.)

6. Creditable Service

In general, creditable service is awarded during the period in which a member contributes to the retirement system.

7. Service Retirement

a. Eligibility:

For an employee to be eligible for service retirement (also referred to as superannuation), one of the following conditions must be met:

(i) completion of 20 years of service

(ii) for an employee hired prior to January 1, 1978, attainment of age 55 as an active member

(iii) for an employee hired on or after January 1, 1978, attainment of age 55 as an active member and completion of ten years of service

(iv) if an employee is a State Police officer (Group 3), attainment of age 50

b. Benefit Amount:

The retirement allowance is determined as a product of the participant's Benefit Rate times Average Salary times Creditable Service, where Benefit Rate is determined from the following table:

Age at Retirement	Percentage of Average Salary Group 1	Group 2	Group 4
65 or Over	.025	.025	.025
64	.024	.025	.025
63	.023	.025	.025
62	.022	.025	.025
61	.021	.025	.025
60	.020	.025	.025
59	.019	.024	.025
58	.018	.023	.025
57	.017	.022	.025
56	.016	.021	.025
55	.015	.020	.025
54	.014	.014	.024
53	.013	.013	.023
52	.012	.012	.022
51	.011	.011	.021
50	.010	.010	.020
49	.009	.009	.019
48	.008	.008	.018
47	.007	.007	.017
46	.006	.006	.016
45	.005	.005	.015
44	.004	.004	.004
43	.003	.003	.003
42	.002	.002	.002
41	.001	.001	.001

For Group 3 (State Police), the benefit is 50% of the participant's final year's rate of regular salary, plus an additional 1% for each year of service in excess of 20 years. In addition, for veterans (all groups) there is an additional benefit of $15 per year for each year of service, up to a maximum of 20 years of service.

8. <u>Deferred Vested Retirement</u>

a. <u>Eligibility</u>:

A participant who has completed ten or more years of creditable service is eligible for a deferred vested retirement benefit. If termination is involuntary, the participant is vested after six years.

b. <u>Benefit Amount</u>:

The participant's accrued benefit is payable commencing at age 55, or may be deferred until later at the employee's option.

c. <u>Refund of Contributions</u>:

In lieu of the deferred pension benefit, a member may elect to receive a refund of their accumulated contributions. Members with ten or more years of service are entitled to 100% of the credited interest on their contributions. Members with five to ten years of service are entitled to 50% of the credited interest on their contributions. No credited interest is provided for members with less than five years of service.

9. <u>Accidental Disability</u>

a. <u>Eligibility</u>:

Participants are eligible for an accidental disability benefit, regardless of service or age, if they become permanently and totally incapacitated for further duty as a result of personal injury sustained while in the performance of duties.

b. <u>Benefit Amount</u>:

The accidental disability amount is 72% of annual salary plus $450 per year for each child plus an additional annuity based upon accumulated Member Contributions with credited interest.

10. Ordinary Disability

a. Eligibility:

An ordinary disability occurs when a member becomes permanently and totally disabled due to sickness or injury that is not job related. In order to be eligible for an ordinary disability benefit, a member must have ten years of service (and be less than age 55).

b. Benefit Amount:

The ordinary disability amount is equal to the accrued retirement benefit as if the member were age 55. If the member was a veteran, the benefit is 50% of the member's final rate of Salary during the preceding 12 months, plus an annuity based upon accumulated Member Contributions plus credited interest. If the participant is over age 55, he will receive not less than the superannuation allowance to which he is entitled.

11. Survivor Benefits

a. Occupational Death:

The survivors of a member who dies due to an occupational injury will be entitled to a lump sum return of contributions plus a pension benefit equal to 72% of the participant's annual Salary.

b. Non-Occupational Death:

Upon the death of a member other than due to an occupational injury, the designated beneficiary will be entitled to a retirement benefit as if Option C had been elected with a minimum of $250 per month to the surviving spouse, plus $120 for the first child, plus $90 for each additional child. If no beneficiary is designated and if the employee worked two years, and is married at least one year, the spouse may elect benefits. If there is no designated beneficiary or surviving spouse, then member contributions are returned. If there are dependent children but no surviving spouse, they may elect minimum survivor benefits of $250 per month plus $120 for the first child and $90 for each additional child.

c. Refund of Contributions:

Upon the death of a member not entitled to survivor benefits, the beneficiary is entitled to a refund of all member contributions with interest.

12. Cost-of-Living Increases

In accordance with the adoption of Chapter 17 of the Acts of 1997, the granting of a cost-of-living adjustment will be determined by an annual vote by the Retirement Board. The amount of increase will be based upon the Consumer Price Index, limited to a maximum of 3.0%, beginning on July 1. All retirees, disabled retirees, and beneficiaries who have been receiving benefits payments for at least one year as of July 1 are eligible for the adjustment. The maximum amount of pension benefit subject to a COLA is $12,000. All COLAs granted to members after 1981 and prior to July 1, 1998 are deemed to be an obligation of the State and are not the liability of the Retirement System.

13. Postretirement Death Benefits

Any benefits following the death of a member after retirement are based upon the form of benefit the participant elected at the time of retirement. There are three available forms as follows:

(i) Option A – Life annuity

(ii) Option B – Life annuity with death benefit equal to excess of member contributions plus credited interest to retirement over annuity benefit paid to member

(iii) Option C – Life annuity with 66-2/3% of benefit continued after death of member to designated joint annuitant

EXHIBIT 6 – ACTUARIAL METHODS AND ASSUMPTIONS:

The actuarial cost method, factors, and assumptions used in determining cost estimates are presented below.

1. **Member Data**

   The member data used in the determination of cost estimates consist of pertinent information with respect to the active, inactive, retired, and disabled members of the employer as supplied by the employer to the actuary.

2. **Valuation Date**

   January 1, 2004.

3. **Actuarial Cost Method**

   The costs of the Plan have been determined in accordance with the individual entry age normal actuarial cost method.

4. **Rate of Investment Return**

   It is assumed that the assets of the fund will accumulate at a compound annual rate of 8.5% per annum.

5. **Salary Scale**

   It is assumed that salaries including longevity will increase at a rate of 5.0% per year.

6. **Cost-of-Living Increases**

   Cost-of-living increases have been assumed to be 3.0% of the lesser of the pension amount and $12,000 per year.

7. **Value of Investments**

   Assets held by the fund are valued at market value as reported by the Public Employees'

Retirement Administration Commission (PERAC). The actuarial value of assets is determined using a five-year smoothing of unrealized gains and losses.

8. Annual Rate of Withdrawal Prior to Retirement

Based on an analysis of experience, the assumed annual rates of withdrawal may best be illustrated by the following rates at the following ages:

Service	General Employees	Police and Fire Employees
0	0.1500	0.0150
10	0.0540	0.0150
20	0.0200	0.0000
30	0.0000	0.0000

9. Annual Rate of Mortality

It is assumed that both preretirement and postretirement mortality are represented by the RP-2000 Mortality Table for males and females. Mortality for disabled members is represented by the RP-2000 Mortality Table set forward two years for all disabled members.

10. Service Retirement

Based on an analysis of experience, the assumed annual retirement rates are illustrated at the following ages:

Age	Male General Employees	Female General Employees	Male and Female Police and Fire Employees
50	0.0100	0.0150	0.02000
51	0.0100	0.0150	0.02000
52	0.0100	0.0200	0.02000
53	0.0100	0.0250	0.05000
54	0.0200	0.0250	0.07500
55	0.0200	0.0550	0.15000
56	0.0250	0.0650	0.10000
57	0.0250	0.0650	0.10000
58	0.0500	0.0650	0.10000
59	0.0650	0.0650	0.15000
60	0.1200	0.0500	0.20000
61	0.2000	0.1300	0.20000
62	0.3000	0.1500	0.25000
63	0.2500	0.1250	0.25000
64	0.2200	0.1800	0.30000
65	0.4000	0.1500	1.00000
66	0.2500	0.2000	1.00000
67	0.2500	0.2000	1.00000
68	0.3000	0.2500	1.00000
69	0.3000	0.2000	1.00000
70	1.0000	1.0000	1.00000

11. Annual Rate of Disability Prior to Retirement

Based on an analysis of experience, the assumed annual rates of disability may best be illustrated by the following probabilities at the following ages:

Attained Age	General Employees	Police and Fire Employees
20	0.0001	0.0010
30	0.0003	0.0030
40	0.0010	0.0030
50	0.0019	0.0125

In addition, it is assumed for the general employees that 45% of all disabilities are ordinary (55% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected).

12. Family Composition

It is assumed that 80% of all members will be survived by a spouse and that females (males) are three years younger (older) than members.

13. Administrative Expenses

The normal cost is increased by an amount equal to the anticipated administrative expenses for the upcoming fiscal year. The amount for fiscal year 2004 is $375,000 and is anticipated to increase at 4.5% per year.

EXHIBIT 7 – GLOSSARY OF TERMS:

This glossary summarizes the technical terms contained in this report.

1. **Actuarial Accrued Liability**

   That portion of the Actuarial Present Value of plan benefits that is not provided for by future employer Normal Costs or employee contributions.

2. **Actuarial Assumptions**
   Assumptions as to the occurrence of future events affecting the Retirement System such as:

   - Rates of investment returns
   - Increases in a member's salary
   - Inflation
   - The probability of mortality, turnover, disablement
   - Retirement at each age and other relevant items

3. **Actuarial Cost Method**

   A procedure for allocating the Actuarial Present Value of pension plan benefits between Normal Cost and Actuarial Accrued Liability.

4. **Actuarial Present Value**

   The single sum amount required at the valuation date that is required to provide for anticipated future events based upon the terms of the plan and the Actuarial Assumptions.

5. **Forecast**

   A projection of future benefit payments or contribution requirements based upon the terms of the plan, the current asset amounts, the Actuarial Assumptions, and additional assumptions as to the replacement of terminating employees with new employees.

6. **Normal Cost**

That portion of the Actuarial Present Value of future benefits that is assigned to the current year.

7. **Unfunded Actuarial Accrued Liability**

That portion of the Actuarial Accrued Liability that is not provided for by current actuarial value of assets.

8. **Valuation Method**

The method used to divide the cost of future benefits among the Actuarial Accrued Liability, the current year's Normal Costs, and future years' Normal Costs. The resulting current funding requirement is then determined as the current year's Normal Cost plus the payment necessary to amortize the Unfunded Actuarial Liability.

9. **Vested Liability**

That portion of the Actuarial Present Value of Accrued Benefits that a member would be entitled to if the member terminated employment with the employer as of the valuation date.

CERTIFICATION:

This report fairly represents the actuarial position of the City of New Bedford Contributory Retirement System contributing as of January 1, 2004, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, the actuarial assumptions used to compute actuarial accrued liability and normal cost is reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience.

Mellon Human Resources and Investor Solutions

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Daniel W. Sherman, ASA, MAAA
Enrolled Actuary No. 99-4086

October 2004